

***Polyalthia saprosma* (Annonaceae),  
a New Species from Borneo**

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**Abstract**

*Polyalthia saprosma* I.M. Turner, *sp. nov.* (Annonaceae), is described from material hitherto confused with *P. cinnamomea* Hook.f. & Thomson. The new species is recorded from Sabah (Malaysia) and Kalimantan (Indonesia) on the island of Borneo.

While working on an account of the Annonaceae for the Tree Flora of Sabah and Sarawak, it became clear that most of the material from Borneo assigned to *Polyalthia cinnamomea* Hook.f. & Thomson was not that species and actually represented an undescribed species.

***Polyalthia saprosma*** I.M. Turner, *sp. nov.*

*A Polyalthia cinnamomea* Hook.f. & Thomson *petalis intus villosis differt.*

**-Typus:** Malaysia, Sabah, Beluran District, Suah Tingguan, K.B. Dev. Camp, Sungai Sapi, 24 April 1963, SAN 36315 [holotype, K (barcode: K000380547), isotype, SAN]. **Figs. 1 & 2.**

**Treelet** or **tree** to 20 m tall. **Twigs** densely brown tomentose when young, glabrous with age, drying with longitudinal wrinkles, often pale and corky. **Leaves** tomentose beneath when young, becoming glabrous with age, thinly chartaceous to subcoriaceous, drying dark to grey-brown above, brown to green-brown below, narrowly oblong elliptic to obovate, 8-16 × 3-7 cm, base obtuse, apex apiculate to shortly acuminate, midrib slightly sunken above in dry leaves with crest of red-brown hairs, midrib prominent beneath, secondary veins obscure from above, slightly raised beneath in dry leaves, 14-16 pairs, looping within margin. Petioles 4-5 mm long, 1-2 mm thick, densely brown pubescent. **Inflorescences** single-flowered, subopposite leaves. **Flowers** malodorous, pedicels 3-4 mm long, densely tomentose, sepals triangular, 6 × 4 mm, densely hairy outside, petals yellow/orange/



Figure 1. The holotype of *Polyalthia saprosma* I.M. Turner.



**Figure 2.** Fruiting specimen (*Aban Gibot* SAN 32512) of *Polyalthia saprosma* I.M. Turner.

brown, linear to 8 cm long, 4 mm wide, apex acute, densely covered with long brown hairs which tend to be paler on the inside, glabrous near the base inside, stamens many, ca 1 mm long, carpels many. Fruiting pedicels 5-8 mm long, ca 2 mm thick, sepals often persisting, **monocarps** to 50 or more, globose or ellipsoidal to 12 mm long, 6-8 mm in diameter, drying black or dark brown, covered with dark brown tomentum, becoming glabrous with age, stipe 2-8 mm long. Seeds 1-2.

*Specimens seen:* **Malaysia**, Sabah: Kelumpang Balong, Tawau, A. Bakar, 9 Jun 1961, (*SAN 18508*); Tawau, Oct 1922-Mar 1923, *A.D.E. Elmer 21475*; Mile 12 M. Road Kalabakan, Tawau, Aban Gibot (*SAN 30571*), 27 Jul 1962; Ulu Balong, Tawau, Aban Gibot (*SAN 32512*), 10 Nov 1962; east of Sepilok Camp, Sandakan, Aban Gibot (*SAN 78649*), 11 Dec 1973; Kota Merudu, Aban Gibot (*SAN 99586*), 11 Aug 1983; Mile 32, Ulu Dusun, Sandakan, Aloysius Simbut (*SAN 78558*), 12 Jul 1973; Kretam For. Res., Sandakan, Amin & Soinin (*SAN 96706*), 20 May 1983; Danum Valley, Ulu Segama, E.J.F. Campbell *et al.* (*SAN 110701*), 30 May 1986; Kalabakan, Fedilis (*SAN 94723*), 6 Apr 1982; Sandakan, *H.P. Nooteboom 1613*, 17 Mar 1970; Ulu Segama, Lahad Datu, L. Madani & Ismail P. (*SAN 108717*), 29 Mar 1985; Madai Forest, Lahat Datu, L.E. Teo & B. David (T. & P. 1113) (*KL 3613*), 25 Sep 1986; Bettotan, *Orolfo 2871*, 23 Feb 1933. **Indonesia**, Kalimantan: Batu Badinging, Bukit Raya, *J.F. Veldkamp 8546*, 5 Feb 1983.

The flowers are reported to smell of rotten meat which is reflected in the chosen epithet (Greek, *sapros* = rotten, putrid; *osme*, *osma* = fragrance, odour). The scent of decay and furry, dark flowers suggest sapromyophily as the pollination syndrome, with some sort of carrion-visiting insects the pollinators.

Vegetatively *P. saprosma* is more likely to be confused with *Polyalthia motleyana* (Hook.f.) Airy Shaw than *P. cinnamomea*. One fairly consistent distinction is that in *P. motleyana* the dry leaves below have venation that contrasts with the lamina by being paler whereas in *P. saprosma* the veins tend to be darker than the lamina.

Flowering specimens of *P. saprosma* are often collected before the corolla is fully expanded. The dark brown tomentum on the relatively short petals has led to confusion of some specimens with *Polyalthia chrysotricha* Ridl., though this species is readily distinguished by the cordate leaf bases, dense tomentum on the undersides of the leaves and the broader petals.

Differences between *P. saprosma* and *P. cinnamomea* are summarised in Table 1. Flowering and fruiting specimens of *P. saprosma* are illustrated in Figs. 1 and 2.

**Table 1.** Summary of differences between *Polyalthia saprosma* and *Polyalthia cinnamomea*.

| Character | <i>Polyalthia saprosma</i>  | <i>Polyalthia cinnamomea</i>  |
|-----------|---|---|
| Leaves    | Typically obovate, apiculate drying grey-brown or olive brown, fringe of red-brown hairs along midrib above | Typically ovate lanceolate, acuminate, drying warm brown, midrib glabrous above |
| Flowers   | Petals villose outside and upper part of inner face   | Petals tomentose outside, glabrous inside                                       |
| Fruits    | Monocarps globose or ellipsoidal to 12 mm long, 6-8 mm in diameter, glabrescent                             | Monocarps pyriform, 20-25 mm long, 12-15 mm diameter, rusty tomentose           |

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